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09/169,065	10/09/1998	LESTER L. JARRELL	ADCM-0003	5206

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EXAMINER

HUYNH, SON P

ART UNIT	PAPER NUMBER
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2611

DATE MAILED: 04/24/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/169,065

Applicant(s)

JARRELL, LESTER L.

Examiner

Son P Huynh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-16 and 18-20 is/are rejected.
- 7) ☒ Claim(s) 17 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 September 1998 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "27" has been used to designate both DSP controller and Communications Module (MODEM). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: communications module 26 on page 11, lines 15 and 23; CODEC 30 on page 11, line 17. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment.
3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: CODEC 29 in figure 4. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Applicant is required to submit a proposed drawing correction in reply to this Office action. However, formal correction of the noted defect may be deferred until after the examiner has considered the proposed drawing correction. Failure to timely submit the proposed drawing correction will result in the abandonment of the application.

Claim Objections

4. Claims 4 –6 are objected to because of the following informalities: “said” on line 24 should be removed. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1 – 2, 7-8, 10-13, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fong (US 6,085,066) and in view of Frett (5,305,464).

Regarding claim 1, Fong discloses a device for use in determining a currently tuned-to channel of a set-top converter box, the device comprising:

an electrical connection to the set-top converter box, the electrical connection being adapted to communicate drive signals provided by the set-top converter box;

a controller (DSP46) being connected to the set-top converter box by the electronic connection and receiving the drive signals transmitted to the set-top converter; wherein the controller receives and interprets the drive signals to generate information representative of the currently tuned-to channel (see figures 2, 4B and 5). However, Fong fails to disclose the set-top converter box having an electronic display.

Frett discloses a light emitting diode (LED) display 18 on a receiver that displays the channel to which the receiver is tuned (see figure 1). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Fong to utilize an LED display in the receiver (set-top converter box) as taught by Frett in order to display the number to which the receiver is being tuned.

Regarding claim 2, Frett discloses the LED display 18 comprises at least one seven-segment display element, and wherein the seven-segment display element is adapted to display an alphanumeric character representation of the currently tuned-to channel of the receiver (see figure 1 and col. 3, line 65 – col. 4, line 10).

Regarding claim 7, Fong discloses the information representative of the tuned channel is output to a second device (NVPU meter 12) connected to the set-top converter 14 via a second electrical connection, and wherein the second device receive and further processes the information representative of the currently tuned-to channel (see figure 2 and 4B).

Regarding claim 8, Fong discloses the NVPU meter 12 comprises a "viewership collection meter", and wherein the "viewership collection meter" stores the information representative of the currently tuned-to channel and forwards it to a predetermined location via a "Telco" at selected times (see figures 1, 4B and col. 3, lines 34-40).

Regarding claim 10, Fong discloses the "display interface board" is adapted to receive power and additional data via the "second electrical connection" (see figures 1, 4B, 5 and col. 3, lines 27-34).

Regarding claim 11, the system elements being claimed correspond to the device elements being claimed in claims 1 and 8 and are analyzed as discussed in the rejection of claims 1 and 8.

Regarding claim 12, Fong in view of Frett discloses a system as discussed in the rejection of claim 11. Fong also discloses the "viewership collection meter" further comprises an audio matching circuit, the audio matching circuit comparing a first audio

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signal of a predetermined channel tuned by the "viewership collection meter" with a second audio signal output by a television to which the set-top converter is connected, wherein if the first audio signal and second audio signal match, the "viewership collection meter" determines that the channel to which the set-top converter box is tuned is the predetermined channel (see fig 5 and col. 2, lines 15-26).

Regarding claim 13, the system elements being claimed correspond to the device elements being claimed in claim 2 and are analyzed as discussed with respect to the rejection of claim 2.

Regarding claim 16, the method elements being claimed correspond to the system elements being claimed in claim 11 and are analyzed as discussed with respect to the rejection of claim 11.

6. Claims 3 and 14 rejected under 35 U.S.C. 103(a) as being unpatentable over Fong (US 6,085,066) in view of Frett (US 5,305,464) as applied to claim 2 above, and further in view of Heider (US 5,780,783).

Regarding claim 3, Fong in view of Frett discloses a device as discussed in the rejection. Fong further discloses the "drive signals" are input to the controller and sampled to determine currently tuned-to channel (see figures 1, 4B and 5). However, neither Fong nor Frett fail to explicitly disclose the "drive signals" are provided to plural

seven-segment display elements in the "electronic display" using a multiplexing scheme in order to display each of alphanumeric character of the currently tuned-to channel.

Heider discloses the signals are provided to plural seven-segment display elements in the "electronic display" using multiplexing scheme (see figures 8 and 9). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Fong and Frett by using multiplexing scheme as taught by Heider in order to transmit a number of separate signals simultaneously over a single line and display each of alphanumeric character of the channel being tuned.

Regarding claim 14, the system elements being claimed correspond to the device elements being claimed in claim 3 and are analyzed as discussed in the rejection of claim 3.

7. Claims 4 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fong (US 6,085,066) in view of Frett (US 5,305,464) and Heider (US 5,780,783) as applied to claim 3 above, and further in view Unno (US 4,692,760).

Regarding claim 4, Fong in view of Frett and Heider discloses a device as discussed in the rejection of claim 3. However, neither reference discloses the "drive signals" comprise scan signals provided over scan lines that selectively enable one seven-segment display element in the "electronic display" and segment signals provided

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over segment lines that drive each segment of the seven-segment display element, wherein the scan lines and the segment lines are input to predetermined pins of an input/output port of the controller in order to determine the currently tuned-to channel.

Unno discloses control unit 20 supplies scan signals to a decoder 23 synchronously with the generation of the segment signal to the seven-segment display 22 (see col. 2, lines 3-16). It is obvious to one of ordinary skill in the art that the scan signals selectively enable one seven-segment display element in the "electronic display". It is also well known in the art that the scan lines and the segment lines are input to predetermined pins of an input/output port of the controller for giving a right result. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Fong, Frett and Heider with a "drive signals" comprises scan signals provided over scan lines that selectively enable one seven-segment display element in the "electronic display" and segment signals provided over segment lines that drive each segment of the seven-segment display element, wherein the scan lines and the segment lines are input to predetermined pins of an input/output port of the controller in order to determine the currently tuned-to channel as taught by Unno and the well-known technique in order to determine the channel being tuned and display it on the seven-segment display.

Regarding claim 15, the system elements being claimed correspond to the device elements being claimed in claim 4 and are analyzed as discussed with respect to the rejection of claim 4.

8. Claims 5 - 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fong (US 6,085,066) in view of Frett (US 5,305,464), Heider (US 5,780,783) and Unno ((US 4,692,760) as applied to claim 4 above, and further in view of Devlin (US 4,325,062).

Regarding claim 5, Fong in view of Frett, Heider and Unno discloses a device as discussed in the rejection of claim 4. However, neither reference discloses the information representative of the tuned channel comprise an ASCII value representative of the currently tuned-to channel.

Devlin discloses seven-segment LED display 150 accepts ASCII code. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Fong, Frett, Heider and Unno to utilize ASCII in information representative of the tuned channel as taught by Devlin in order to give a standard data transmission.

Regarding claim 6, Fong further discloses the "viewership collection meter" further comprises an audio matching circuit, the audio matching circuit comparing a first

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audio signal of a predetermined channel tuned by the "viewership collection meter" with a second audio signal output by a television to which the set-top converter is connected, wherein if the first audio signal and second audio signal match, the "viewership collection meter" determines that the channel to which the set-top converter box is tuned is the predetermined channel (see fig 5 and col. 2, lines 15-26).

9. Claims 9, 18 – 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fong (US 6,085,066) in view of Frett (US 5,305,464), as applied to claims 8 and 16 above, and further in view of Devlin (US 4,325,062).

Regarding claim 9, Fong in view of Frett discloses a device as discussed in the rejection of claim 8. However, neither reference discloses the information representative of the tuned channel comprise an ASCII value representative of the currently tuned-to channel.

Devlin discloses seven-segment LED display 150 accepts ASCII code. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Fong, Frett to utilize ASCII in information representative of the tuned channel in order to give a standard data transmission.

Regarding claim 18, the method elements being claimed correspond to the device elements being claimed in claim 9 and are analyzed as discussed with the

rejection of claim 9. Obviously, the ASCII value is generated for the channel to which the set-top converter box is being tuned in order to display it in the electronic display.

Regarding claim 19, Fong in view of Frett and Devlin discloses a method as discussed in the rejection of claim 18. However, neither reference discloses the step of outputting the coded representative comprises serially transmitting the ASCII value to a viewership meter. Official Notice is taken that serially transmitting the ASCII for transmitting data in sequence is well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Fong, Frett and Devlin with a well-known technique of serially transmitting the ASCII value to viewership meter in order to transmit the data in sequence.

Regarding claim 20, Fong in view of Frett and Devlin discloses a method as discussed in the rejection of claim 19. Fong in view of Devlin further discloses storing, at the viewership meter, the ASCII value; and forwarding the ASCII value at predetermined times to a central collection site as discussed in the rejection of claim 8.

Allowable Subject Matter

10. Claim 17 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The prior art of records fails or fairly suggests that the step of determining a channel to which the set-top converter box is tuned comprising:

- (a) determining if a scan line for the seven-segment display element is active;
- (b) if the scan line is active at step (a), then determining which of the segment lines are active to determine character being displayed by the seven-segment display element; and

- © repeating steps (a) and (b) for each seven-segment display element in the electronic display.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Son P Huynh whose telephone number is 703-305-1889. The examiner can normally be reached on 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Faile can be reached on 703-305-4380. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the customer service office whose telephone number is 703-306-0377.

Son P. Huynh
April 10, 2002


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